Abstract of the Disclosure:

A method of approximating the behavior of an integrated

circuit includes applying a set of test patterns to a system

for testing or simulating an integrated circuit, applying the

5   set of test patterns to a neural network, comparing the

outputs of the system for testing or simulating the integrated

circuit and the outputs of the neural network, and adapting

parameters of the neural network to approximate the behavior

of the integrated circuit on the basis of the comparison. The

10   dynamic behavior of the integrated circuit device can be

learned from a set of random test patterns using a neural

network. After the learning process has been completed, the

automatic test equipment is able to perform a test pattern

classification. The automatic test equipment may thus select

15   test patterns for a subsequent simulation or testing of the

integrated circuit. The selected patterns can be further

optimized using a genetic algorithm.

MB/bb